ABSTRACT OF THE DISCLOSURE

An electronic article surveillance system and method are disclosed. Pulses are emitted in an electromagnetic field, and in monitoring intervals between the pulses, reply signals are received from alarm labels within the surveillance area of the system. An incoming signal is sampled in the system. The zero crossings of the sampled signals are identified, and the phase positions thereof are compared with corresponding phase positions of zero crossings of an incoming signal, received and sampled in a previous monitoring interval. If these phase positions agree sufficiently well, an alarm can be initiated.